

CLAIMS

1. A tonometric device (20) for examination of respiratory insufficiency and regional tissue perfusion failure in patients comprising a distal end (22) for
5 introducing into the gastrointestinal tract of the body of a patient, a section (24) to be introduced into the body, and a section (3) for fixing the position of the device to the patient, wherein the section to be introduced (24) comprises a first tube (1) to which an additional tubing (4) is connected, characterized in that it comprises a second tube (2) arranged substantially parallel with and fixed to the
10 first tube (1), wherein the distal end (22) of the second tube (2) is in communicating connection with the section tube (1), and at least the part to be introduced (24) of the first tube (1) is made of a material readily permeable for gases, especially for carbon dioxide but substantially impermeable for body fluids and other substances, preferably of silicone rubber, and an additional
15 tubing (5) is connected to the second tube (2).

2. A device as claimed in claim 1, wherein the diameter of the first and second tubes (1, 2) is substantially constant between the distal end (22) and the fixing section (3).

3. A device as claimed in claim 1, wherein the additional tubings (4, 5)
20 are provided with connecting means (6, 7).

4. A device as claimed in claim 3, wherein the connecting means (6, 7) are constructed for connecting them to the connecting stub of a medical syringe.

5. A device as claimed in claim 1, wherein the outer diameter of the tubes (1, 2) ranges from 1 to 4 mm and the wall thickness ranges from 0.3 to 1.0 mm.

25 6. A device as claimed in claim 5, wherein the outer diameter of the first tube (1) ranges from 2 to 4 mm and its wall thickness from 0.5 to 1.0 mm, and the outer diameter of the second tube (2) ranges from 1.0 to 1.5 mm and its wall thickness from 0.3 to 0.5 mm.

30 7. A device as claimed in claim 1, wherein the second tube (2) is built together with the first tube (1), or the second tube (2) is formed as a second passage (2') in the wall surrounding the passage (1') of the first tube (1).

8. A device as claimed in claim 1, wherein the additional tubings (4, 5) are connected to each other and form a closed system with the tubes (1, 2), wherein the closed system is filled up with an indicator-containing liquid
35 suitable for detecting carbon-dioxide concentration.

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9. A device as claimed in claim 8, wherein the liquid is an aqueous solution of 150 mM sodium chloride, 25 mM sodium hydrogen carbonate and 0,15% w/w of phenolic red indicator.

5 10. A kit for examination of respiratory insufficiency and regional tissue perfusion failure in patients, which comprises a tonometric device according to any of claims 1 to 9 and a measuring unit (100) which can be connected to it and is suitable for the direct or indirect measurement of carbon dioxide.